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EXAMINER
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MOFIZ, APUM

ART UNIT	PAPER NUMBER
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2175

DATE MAILED: 02/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/884,504

Applicant(s)

LAYEGHI, SHAHAB

Examiner

Apu M Mofiz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2001.
- 2a) ☐ This action is **FINAL**.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4&6.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-13, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purnaveja et al. (U.S. Patent No. 6,006,241 and Purnaveja hereinafter) in view of Tao (U.S. Patent No. 6,243,481).

As to claim 1, Purnaveja teaches an encoder (col 6, lines 25-35) for encoding a media file (i.e. *"a previously digitized video file 314, e.g., a Video for Windows (.avi) file."*) (col 2, lines 25-67) so that it is capable of being decoded (i.e. *"Next, the encoded video/audio streams are decoded by the decoder 964, i.e., decompressed using a suitable technique, and then displayed at client computer 240 by renderer 965."*) (col 9, lines 1-10) for playback as a media stream (i.e. *"The video/audio streams and annotation streams are stored in stream server(s) for subsequent retrieval by client computer(s) in a coordinated manner, so that the client computer(s) is able to synchronously display the video frames and displayable event(s) in a video window and event window(s), respectively."*) (col 3, lines 1-20), a method for encoding data (i.e. annotation data) (Abstract) and time restriction information (i.e. *"Another visual control aid, zoom bar 716, enables designer 219 to select the respective portions of the complete time tracks 750, 760, 770, 780, and 790, and defined by start time indicator 712 and end time indicator 718, which is currently displayed by author tool 700."*) (col 7, lines 10-67) with said media file such that when said encoded media file is decoded for playback (i.e. when the video data/frames are displayed or audio data played (i.e. multimedia data) at the client computer) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A) as said media stream, said

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data is reproduced in said media stream only during a time period predetermined (i.e.

*"For example, URL addresses (event locators) pointing to HTML pages enable client computer 240 to subsequently retrieve textual and/or graphical elements to be displayed at predetermined time as defined by the time markers of the flipper stream."*) (col 7, lines 10-67) by said time restriction information, comprising the steps

of: (1) receiving a media file (col 2, lines 25-67); (2) receiving at least one data file (i.e. *"When author module 318 has completed building an annotation stream, e.g., the flipper stream, the annotation stream is given a file name and loaded into a convenient server, e.g., stream server 220, for subsequent retrieval by client*

*computer 240."*) (col 7, lines 10-67) comprising at least one data segment (i.e. the annotation frame)

(Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25); (3) receiving time restriction

information (col 7, lines 10-67) for each said data segment (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9;

Fig.10A; col 3, lines 1-25) that specifies said time period (col 7, lines 10-67) when said data

segment (col 3, lines 1-25) is to be reproduced as part of (i.e. *"In view of the foregoing, there are*

*desired improved techniques for reliably providing a multimedia stream such as a video and audio stream, together*

*with annotations such as textual and graphical information in an integrated seamless package to client computer(s),*

*while efficiently utilizing the network resources and consuming minimal computational cycles on the client*

*computer(s)."*) (col 2, lines 25-67) said decoded media stream (col 3, lines 1-20); and (4) receiving

encoded media file (col 2, lines 25-67); and said data segment (i.e. the annotation frames) (col 3,

lines 1-25) and said corresponding time restriction information (col 7, lines 10-67) such that

said data segment (i.e. the annotation frame) (col 3, lines 1-25) is reproduced by a decoder (i.e. the

decoder 964) (col 9, lines 1-10) during said specified time period (i.e. *"For example, URL addresses*

*(event locators) pointing to HTML pages enable client computer 240 to subsequently retrieve textual and/or*

*graphical elements to be displayed at predetermined time as defined by the time markers of the flipper stream."*)

(col 7, lines 10-67).

Purnaveja does not explicitly teach embedding data segment as part of said encoded media data.

Tao teaches embedding data segment as part of said encoded media data (i.e.

*"The present invention pertains to a method and system thereof for invisibly encoding and embedding information within digital data representing, for example, audio data, image data, and video data." ... "In one embodiment, the digital data are in a compressed format (e.g. JPEG MPEG for image data, MP3 or AC3 for audio data, as well as other data compression formats.)"*) (Abstract; col 2, lines 28-45; col 3, lines 1-10).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Purnaveja with the teachings of Tao to include embedding data segment as part of said encoded media data with the motivation to embed multiple speech streams into a video, each speech stream in a different language, so that the video can be distributed to a wide range of users who can then each view the video in the language of their choosing (Tao, col 1, lines 30-35) and to store a large amount of information while being robust against noise (Tao, col 4, lines 33-36).

As to claim 2, Purnaveja teaches that the time restriction information comprises a start time tag that specifies when said time period is to begin (i.e. *"Another visual control aid, zoom bar 716, enables designer 219 to select the respective portions of the complete time tracks 750, 760, 770, 780, and 790, and defined by start time indicator 712 and end time indicator 718, which is currently displayed by author tool 700."*) (col 7, lines 10-67).

As to claim 3, Purnaveja teaches that the time restriction information comprises a stop time tag that specifies when said time period is to end (i.e. *"Another visual control aid, zoom bar 716, enables designer 219 to select the respective portions of the complete time tracks 750, 760, 770, 780, and 790, and defined by start time indicator 712 and end time indicator 718, which is currently displayed by author tool 700."*) (col 7, lines 10-67).

As to claim 4, Purnaveja teaches that the time restriction information comprises a start time tag that specifies when said time period is to begin and a stop time tag that specifies when said time period is to end (i.e. *"Another visual control aid, zoom bar 716, enables designer 219 to select the respective portions of the complete time tracks 750, 760, 770, 780, and 790, and defined by start time indicator 712 and end time indicator 718, which is currently displayed by author tool 700."*) (col 7, lines 10-67).

As to claim 5, Purnaveja teaches that the data is reproduced at a specified point in said media stream (i.e. *"For example, URL addresses (event locators) pointing to HTML pages enable client computer 240 to subsequently retrieve textual and/or graphical elements to be displayed at predetermined time as defined by the time markers of the flipper stream."*) (col 7, lines 10-67).

Purnaveja does not explicitly teach embedding data segment as part of said encoded media data.

Tao teaches embedding data segment as part of said encoded media data (i.e. *"The present invention pertains to a method and system thereof for invisibly encoding and embedding information within digital data representing, for example, audio data, image data, and video data." ... "In one embodiment, the digital data are in a compressed format (e.g. JPEG MPEG for image data, MP3 or AC3 for audio data; as well as other data compression formats.)"*) (Abstract; col 2, lines 28-45; col 3, lines 1-10).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Purnaveja with the teachings of Tao to include embedding data segment as part of said encoded media data with the motivation to embed multiple speech streams into a video, each speech stream in a different language, so that the video can be distributed to a wide range of users who can then each view the video in the language of their choosing (Tao, col 1, lines 30-35) and to store a large amount of information while being robust against noise (Tao, col 4, lines 33-36).

As to claim 6, Purnaveja teaches that the data segment (col 3, lines 1-25) comprises a document file (i.e. *"The first type of annotation streams are data annotation streams in which the displayable event data are embedded within the annotation streams." ... "The second type of annotation streams are locator annotation streams in which the displayable data is either too cumbersome and/or is continually evolving to be embedded as static data within the annotation stream. Instead, event locator(s) pointing to the location of the displayable data are stored in the annotation streams instead of the displayable data. Examples include URL addresses pointing to HTML pages."*) (Examiner asserts that whether the data is embedded in the annotation stream or the event locator is pointing to the HTML pages, they are both document files) (col 6, lines 50-67).

As to claim 7, Purnaveja teaches that the data segment (col 3, lines 1-25) comprises an Internet address (i.e. *"The second type of annotation streams are locator annotation streams in which the displayable data is either too cumbersome and/or is continually evolving to be embedded as static data within the annotation stream. Instead, event locator(s) pointing to the location of the displayable data are stored in the annotation streams instead of the displayable data. Examples include URL addresses pointing to HTML pages."*) (col 6, lines 50-67).

As to claim 8, Purnaveja teaches that the media file is an audio file (i.e. *"Annotated multimedia streams can include a compressed video stream for display in a video window, an accompanying compressed audio stream and annotations."* ... *"Sources for generating video streams include a video camera 312, a video cassette recorder (VCR) (not shown) or a previously digitized video file 314, e.g., a Video for Windows (.avi) file."*) (Examiner asserts that Purnaveja explicitly states that the system and the associated method are applicable to video, audio and image data. A video file example is given, but it is also applicable to audio media file(s)) (col 2, lines 35-67; col 5, lines 54-64) and said data segment (col 3, lines 1-25) is a non-audio data segment (i.e. *"The first type of annotation streams are data annotation streams in which the displayable event data are embedded within the annotation streams. Examples of data annotation streams include ticker tape data embedded within the annotation stream."*) (col 6, lines 25-67).

As to claim 9, Purnaveja teaches a audio file (i.e. *"Annotated multimedia streams can include a compressed video stream for display in a video window, an accompanying compressed audio stream and annotations."* ... *"Sources for generating video streams include a video camera 312, a video cassette recorder (VCR) (not shown) or a previously digitized video file 314, e.g., a Video for Windows (.avi) file."*) (Examiner asserts that Purnaveja explicitly states that the system and the associated method are applicable to video, audio and image data. A video file example is given, but it is also applicable to audio media file(s)) (col 2, lines 35-67; col 5, lines 54-64).

Purnaveja does not explicitly teach that the audio file is an MP3 file.

Tao teaches that the audio file is an MP3 file (i.e. *"the digital data are in a compressed format (e.g., JPEG or MPEG for image data, MP3 or AC3 for audio data, as well as other data compression formats)." (Abstract; col 3, lines 1-10).*



It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Purnaveja with the teachings of Tao to include that the audio file is an MP3 file with the motivation to provide for data that is robust against noise, easy to encode, detect, retrieve, decode and permits for relatively large amounts of hidden data to be encoded (Tao, col 12, lines 5-16).

As to claim 10, Purnaveja teaches an encoder (Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 6, lines 25-35) for encoding a media file (i.e. *"a previously digitized video file 314, e.g., a Video for Windows (.avi) file."*) (col 2, lines 25-67) so that it is capable of being decoded (i.e. *"Next, the encoded video/audio streams are decoded by the decoder 964, i.e., decompressed using a suitable technique, and then displayed at client computer 240 by renderer 965."*) (col 9, lines 1-10) for playback (i.e. when the video data/frames are displayed or audio data played (i.e. multimedia data) at the client computer) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A) as a media stream (i.e. *"The video/audio streams and annotation streams are stored in stream server(s) for subsequent retrieval by client computer(s) in a coordinated manner, so that the client computer(s) is able to synchronously display the video frames and displayable event(s) in a video window and event window(s), respectively."*) (col 3, lines 1-20), a method for encoding a data segment (i.e. the annotation frame) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25) and time restriction information (i.e. *"Another visual control aid, zoom bar 716, enables designer 219 to select the respective portions of the complete time tracks 750, 760, 770, 780, and 790, and defined by start time indicator 712 and end time indicator 718, which is currently displayed by author tool 700."*) (col 7, lines 10-67) for said segment with said media file (col 2, lines 25-67) such that when said encoded media file is decoded for playback (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A) as said media stream (col 3, lines 1-20), said data segment (i.e. the annotation frame) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-

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25) is reproduced at a specified point in said media stream only during a time period (i.e. *"For example, URL addresses (event locators) pointing to HTML pages enable client computer 240 to subsequently retrieve textual and/or graphical elements to be displayed at predetermined time as defined by the time markers of the flipper stream."*) (col 7, lines 10-67) predetermined by said time restriction information (col 7, lines 10-67), comprising the steps of: (a) receiving a media file (col 2, lines 25-67); (b) receiving a segment of data (i.e. the annotation frame) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A); (c) receiving the specifics of said time period when said data segment (col 3, lines 1-25) is to be reproduced, including one of the following: i) a start time (i.e. the start time) (col 7, lines 10-67), ii) a stop time (i.e. the end time) (col 7, lines 10-67), iii) both a start and a stop time (col 7, lines 10-67).

Purnaveja does not explicitly teach embedding data segment as part of said encoded media data.

Tao teaches embedding data segment as part of said encoded media data (i.e. *"The present invention pertains to a method and system thereof for invisibly encoding and embedding information within digital data representing, for example, audio data, image data, and video data." ... "In one embodiment, the digital data are in a compressed format (e.g. JPEG MPEG for image data, MP3 or AC3 for audio data, as well as other data compression formats.)"*) (Abstract; col 2, lines 28-45; col 3, lines 1-10).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Purnaveja with the teachings of Tao to include embedding data segment as part of said encoded media data with the motivation to embed multiple speech streams into a video, each speech stream in a different language, so that the video can be distributed to a wide range of users who can then each view the video in the language of their choosing (Tao, col 1, lines 30-35) and

to store a large amount of information while being robust against noise (Tao, col 4, lines 33-36).

As to claim 11, Purnaveja teaches that the media file is an audio file (i.e. *"Annotated multimedia streams can include a compressed video stream for display in a video window, an accompanying compressed audio stream and annotations." ... "Sources for generating video streams include a video camera 312, a video cassette recorder (VCR) (not shown) or a previously digitized video file 314, e.g., a Video for Windows (.avi) file."*) (Examiner asserts that Purnaveja explicitly states that the system and the associated method are applicable to video, audio and image data. A video file example is given, but it is also applicable to audio media file(s)) (col 2, lines 35-67; col 5, lines 54-64) and said data segment (col 3, lines 1-25) is a non-audio data segment (i.e. *"The first type of annotation streams are data annotation streams in which the displayable event data are embedded within the annotation streams. Examples of data annotation streams include ticker tape data embedded within the annotation stream."*) (col 6, lines 25-67).

As to claim 12, Purnaveja teaches a decoder (i.e. the decoder 964) (col 9, lines 1-10) for decoding an encoded media file (i.e. *"a previously digitized video file 314, e.g., a Video for Windows (.avi) file."*) (col 2, lines 25-67) for playback as a media stream (i.e. *"The video/audio streams and annotation streams are stored in stream server(s) for subsequent retrieval by client computer(s) in a coordinated manner, so that the client computer(s) is able to synchronously display the video frames and displayable event(s) in a video window and event window(s), respectively."*) (col 3, lines 1-20), a method for decoding data (i.e. *"Annotation interpreter 963 parses annotation frames in real time in the form of messages from stream server 220."*) (col 9, lines 1-25) and time restriction information (i.e. *"Another visual control aid, zoom bar 716, enables designer 219 to select the respective portions of the complete time tracks 750, 760, 770, 780, and 790, and defined by start time indicator 712 and end time indicator 718, which is currently displayed by author tool 700."*)

(col 7, lines 10-67), comprising the steps of: (1) receiving a block (i.e. frame) of said encoded media file (col 2, lines 25-67); (2) decoding a data segment (i.e. *"Annotation interpreter 963 parses annotation frames in real time in the form of messages from stream server 220."*) (col 3, lines 1-25; col 9, lines 1-25); (3) decoding said time restriction information (col 7, lines 10-67) embedded (col 6, lines 55-67; col 7, lines 14-28) within said data segment (i.e. the annotation frame) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25), wherein said time restriction information (col 7, lines 10-67) specifies a time period (i.e. *"For example, URL addresses (event locators) pointing to HTML pages enable client computer 240 to subsequently retrieve textual and/or graphical elements to be displayed at predetermined time as defined by the time markers of the flipper stream."*) (col 7, lines 10-67) when said data segment (col 3, lines 1-25) is to be reproduced with said decoded media stream (i.e. *"The video/audio streams and annotation streams are stored in stream server(s) for subsequent retrieval by client computer(s) in a coordinated manner, so that the client computer(s) is able to synchronously display the video frames and displayable event(s) in a video window and event window(s), respectively."*) (col 3, lines 1-20); and (4) reproducing said data segment (i.e. the annotation frame) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25) at a specified point in said decoded media stream for playback only during said specified time period (col 7, lines 10-67).

Purnaveja does not explicitly teach embedding data segment as part of said encoded media data.

Tao teaches embedding data segment as part of said encoded media data (i.e. *"The present invention pertains to a method and system thereof for invisibly encoding and embedding information within digital data representing, for example, audio data, image data, and video data." ... "In one embodiment, the digital data are in a compressed format (e.g. JPEG MPEG for image data, MP3 or AC3 for audio data, as well as other data compression formats.)"*) (Abstract; col 2, lines 28-45; col 3, lines 1-10).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Purnaveja with the teachings of Tao to include embedding data segment as part of said encoded media data with the motivation to embed multiple speech streams into a video, each speech stream in a different language, so that the video can be distributed to a wide range of users who can then each view the video in the language of their choosing (Tao, col 1, lines 30-35) and to store a large amount of information while being robust against noise (Tao, col 4, lines 33-36).

As to claim 13, Purnaveja teaches that the reproducing of said data segment (col 3, lines 1-25) includes subsequent processing for enabling the data to be displayed to a user (i.e. *The second type of annotation streams are locator annotation streams in which the displayable data is either too cumbersome and/or is continually evolving to be embedded as static data within the annotation stream. Instead, event locator(s) pointing to the location of the displayable data are stored in the annotation streams instead of the displayable data. Examples include URL addresses pointing to HTML pages.* ... *"In this example, URL addresses, for synchronizing HTML page flips with video stream are provided to web browser 950 thereby permitting client computer 240 to subsequently retrieve and display various textual and graphical elements changing at predetermined points corresponding to the timeline of the video stream. Note that HTML pages can be retrieved from one or more web server(s) 230."*) (Examiner asserts that the client needs user input (or client has to determine if the user wants to reproduce the HTML pages in the web browser using the URL/ internet address provided in the annotation frames) to retrieve the HTML pages from the web server(s)) (col 6, lines 50-67; col 9, lines 45-67).

As to claim 22, Purnaveja teaches a system for encoding data (i.e. the annotation data) and time restriction information (i.e. *"Another visual control aid, zoom bar 716, enables designer 219 to select the respective portions of the complete time tracks 750, 760, 770, 780, and 790, and defined by start time indicator 712 and end time indicator 718, which is currently displayed by author tool 700."*) (col 7, lines 10-67) with a media file (i.e. *"a previously digitized video file 314, e.g., a Video for Windows (.avi) file."*) (col 2, lines 25-67) and for the later decoding of said encoded media file such that when said encoded media file is decoded for playback (i.e. when the video data/frames are displayed or audio data played (i.e. multimedia data) at the client computer) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A) as a media stream (i.e. *"The video/audio streams and annotation streams are stored in stream server(s) for subsequent retrieval by client computer(s) in a coordinated manner, so that the client computer(s) is able to synchronously display the video frames and displayable event(s) in a video window and event window(s), respectively."*) (col 3, lines 1-20), said data is reproduced in said media stream only during a time period predetermined (i.e. *"For example, URL addresses (event locators) pointing to HTML pages enable client computer 240 to subsequently retrieve textual and/or graphical elements to be displayed at predetermined time as defined by the time markers of the flipper stream."*) (col 7, lines 10-67) by said time restriction information (col 7, lines 10-67), comprising: an encoder (col 6, lines 25-35) operative to receive said media file (col 2, lines 25-67), at least one data file (i.e. *"When author module 318 has completed building an annotation stream, e.g., the flipper stream, the annotation stream is given a file name and loaded into a convenient server, e.g., stream server 220, for subsequent retrieval by client computer 240."*) (col 7, lines 10-67) comprising at least one data segment (i.e. the annotation frame) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25), and time restriction information (col 7, lines 10-67) for each said data segment (i.e. the annotation frame) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25); and a decoder (i.e. the decoder 964) (col 9, lines 1-10) operative to decode said encoded media

file (col 2, lines 25-67) into said decoded media stream (col 3, lines 1-20), said data segment (i.e. the annotation frame) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25) and said time restriction information (col 7, lines 10-67), and operative to playback (i.e. when the video data/frames are displayed or audio data played (i.e. multimedia data) at the client computer) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A) said data segment (i.e. the annotation frame) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25) as part of said decoded media stream only during said time period (i.e. *"For example, URL addresses (event locators) pointing to HTML pages enable client computer 240 to subsequently retrieve textual and/or graphical elements to be displayed at predetermined time as defined by the time markers of the flipper stream."*) (col 7, lines 10-67) specified by said corresponding time restriction information (col 7, lines 10-67).

Purnaveja does not explicitly teach embedding data segment as part of said encoded media data.

Tao teaches embedding data segment as part of said encoded media data (i.e. *"The present invention pertains to a method and system thereof for invisibly encoding and embedding information within digital data representing, for example, audio data, image data, and video data." ... "In one embodiment, the digital data are in a compressed format (e.g. JPEG MPEG for image data, MP3 or AC3 for audio data, as well as other data compression formats.)"*) (Abstract; col 2, lines 28-45; col 3, lines 1-10).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Purnaveja with the teachings of Tao to include embedding data segment as part of said encoded media data with the motivation to embed multiple speech streams into a video, each speech stream in a different language, so that the video can be distributed to a wide range of users who can then each view the video in the language of their choosing (Tao, col 1, lines 30-35) and

to store a large amount of information while being robust against noise (Tao, col 4, lines 33-36).

As to claim 23, Purnaveja teaches a method for encoding (i.e. *"a previously digitized video file 314, e.g., a Video for Windows (.avi) file."*) (col 2, lines 25-67) and thereafter decoding (i.e. *"Next, the encoded video/audio streams are decoded by the decoder 964, i.e., decompressed using a suitable technique, and then displayed at client computer 240 by renderer 965."*) (col 9, lines 1-10) a media file (i.e. *"a previously digitized video file 314, e.g., a Video for Windows (.avi) file."*) (col 2, lines 25-67) such that a data segment (i.e. the annotation frame) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25) and said media file after encoding is reproduced during decoding at a specified point during a predetermined time period (i.e. *"For example, URL addresses (event locators) pointing to HTML pages enable client computer 240 to subsequently retrieve textual and/or graphical elements to be displayed at predetermined time as defined by the time markers of the flipper stream."*) (col 7, lines 10-67) for playback (i.e. when the video data/frames are displayed or audio data played (i.e. multimedia data) at the client computer) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A) as a media stream (i.e. *"The video/audio streams and annotation streams are stored in stream server(s) for subsequent retrieval by client computer(s) in a coordinated manner, so that the client computer(s) is able to synchronously display the video frames and displayable event(s) in a video window and event window(s), respectively."*) (col 3, lines 1-20) for a user, comprising the steps of: (1) receiving a media file (i.e. *"a previously digitized video file 314, e.g., a Video for Windows (.avi) file."*) (col 2, lines 25-67); (2) receiving at least one data file (i.e. *"When author module 318 has completed building an annotation stream, e.g., the flipper stream, the annotation stream is given a file name and loaded into a convenient server, e.g., stream server 220, for subsequent retrieval by client computer 240."*) (col 7, lines 10-67) comprising at least one data segment (i.e. the annotation frame) (Abstract; Fig.3; Fig.4B;



Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25); (3) receiving time restriction information for each said data segment (i.e. the annotation frame) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25) that specifies said time period (i.e. *"For example, URL addresses (event locators) pointing to HTML pages enable client computer 240 to subsequently retrieve textual and/or graphical elements to be displayed at predetermined time as defined by the time markers of the flipper stream."*) (col 7, lines 10-67) when said data segment (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25) is to be reproduced as part of said decoded media stream (i.e. *"The video/audio streams and annotation streams are stored in stream server(s) for subsequent retrieval by client computer(s) in a coordinated manner, so that the client computer(s) is able to synchronously display the video frames and displayable event(s) in a video window and event window(s), respectively."*) (col 3, lines 1-20); and (4) receiving encoded media file (col 2, lines 25-67); and said data segment (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25) and said corresponding time restriction information (i.e. *"Another visual control aid, zoom bar 716, enables designer 219 to select the respective portions of the complete time tracks 750, 760, 770, 780, and 790, and defined by start time indicator 712 and end time indicator 718, which is currently displayed by author tool 700."*) (col 7, lines 10-67) such that said data segment (col 3, lines 1-25) is reproduced by a decoder (i.e. the decoder 964) (col 9, lines 1-10) during said specified time period (col 7, lines 10-67) (5) receiving a block (i.e. the audio/video frame) (Abstract) of said encoded media file (col 8, lines 59-67); (6) decoding (i.e. interpreting the encoded annotated frame by annotation interpreter 963) (col 9, lines 10-25) said data segment (col 3, lines 1-25); (7) decoding said time restriction information (col 7, lines 10-67) embedded (i.e. *"The first type of annotation streams are data annotation streams in which the displayable event data are embedded within the annotation streams. Examples of data annotation streams include ticker tape data embedded within the annotation stream."*) (col 6, lines 49-67) within said block for said data segment (i.e. interpreting the encoded annotated frame by annotation interpreter 963) (col 3, lines 1-25; col 9,

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lines 10-25), wherein said time restriction information (col 7, lines 10-67) specifies a time period (col 7, lines 10-67) when said data segment (col 3, lines 1-25) is to be reproduced as part of said decoded media stream (i.e. *"The video/audio streams and annotation streams are stored in stream server(s) for subsequent retrieval by client computer(s) in a coordinated manner, so that the client computer(s) is able to synchronously display the video frames and displayable event(s) in a video window and event window(s), respectively."*) (col 3, lines 1-20); and (8) reproducing said data segment (i.e. interpreting the encoded annotated frame by annotation interpreter 963) (col 3, lines 1-25; col 9, lines 10-25) at a specified point in said decoded media stream for playback (i.e. when the video data/frames are displayed or audio data played (i.e. multimedia data) at the client computer) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A) only during said specified time period (col 7, lines 10-67).

Purnaveja does not explicitly teach embedding data segment as part of said encoded media data.

Tao teaches embedding data segment as part of said encoded media data (i.e. *"The present invention pertains to a method and system thereof for invisibly encoding and embedding information within digital data representing, for example, audio data, image data, and video data." ... "In one embodiment, the digital data are in a compressed format (e.g. JPEG MPEG for image data, MP3 or AC3 for audio data, as well as other data compression formats.)"*) (Abstract; col 2, lines 28-45; col 3, lines 1-10).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Purnaveja with the teachings of Tao to include embedding data segment as part of said encoded media data with the motivation to embed multiple speech streams into a video, each speech stream in a different language, so that the video can be distributed to a wide range of users who can then each view the video in the language of their choosing (Tao, col 1, lines 30-35) and

to store a large amount of information while being robust against noise (Tao, col 4, lines 33-36).

3. Claims 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purnaveja et al. (U.S. Patent No. 6,006,241 and Purnaveja hereinafter) in view of Tao (U.S. Patent No. 6,243,481) and Sonoda et al. (U.S. Patent No. 6,557,171 and Sonoda hereinafter).

The teachings of Purnaveja and Tao have been discussed previously in the above rejections.

As to claim 14, Purnaveja teaches a decoder (i.e. the decoder 964) (col 9, lines 1-10) for decoding an encoded media file (i.e. *"a previously digitized video file 314, e.g., a Video for Windows (.avi) file."*) (col 2, lines 25-67) for playback as a media stream (i.e. *"The video/audio streams and annotation streams are stored in stream server(s) for subsequent retrieval by client computer(s) in a coordinated manner, so that the client computer(s) is able to synchronously display the video frames and displayable event(s) in a video window and event window(s), respectively."*) (col 3, lines 1-20), a method for decoding (i.e. interpreting the encoded annotated frame by annotation interpreter 963) (col 9, lines 10-25) an embedded (i.e. *"The first type of annotation streams are data annotation streams in which the displayable event data are embedded within the annotation streams. Examples of data annotation streams include ticker tape data embedded within the annotation stream."*) (col 6, lines 49-67) data segment (i.e. the annotation frame) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25) and time restriction information (i.e. *"Another visual control aid, zoom bar 716, enables designer 219 to select the respective portions of the complete time tracks 750, 760, 770, 780, and 790, and defined by start time indicator 712 and end time indicator 718, which is currently displayed by author*

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*tool 700.*") (col 7, lines 10-67) from said encoded media file (i.e. *"a previously digitized video file 314, e.g., a Video for Windows (.avi) file."*) (col 2, lines 25-67) such that a data segment (i.e. the annotation frame) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25) wherein said data segment is to be reproduced at a specified point in said media stream (col 3, lines 1-20) only during a time period predetermined (i.e. *"For example, URL addresses (event locators) pointing to HTML pages enable client computer 240 to subsequently retrieve textual and/or graphical elements to be displayed at predetermined time as defined by the time markers of the flipper stream."*) (col 7, lines 10-67) by said time restriction information (col 7, lines 10-67), comprising the steps of: (a) reading a block (i.e. video/audio frame) (col 8, lines 59-67) of said encoded media file (col 2, lines 25-67); (b) determining whether said data segment (i.e. annotation frame) (col 3, lines 1-25) exists (i.e. *"Ticker annotation frames are provided by the stream server 220 synchronously with the video/audio frames so that the annotations, i.e., displayable ticker data can be synchronized for display at client computer 240 at predetermined points corresponding to the timeline of the video stream."*) (The Examiner asserts that the client retrieves and displays the annotation data according to the timeline. The client first has to first determine if there is any annotation frames. If there is no annotation frames, the client does not have to display annotation data, it just plays the video/audio stream data) (col 9, lines 40-67); (c) if said data segment (i.e. annotation frame) (col 3, lines 1-25) does not exist, then proceeding to step (p) (i.e. *"Ticker annotation frames are provided by the stream server 220 synchronously with the video/audio frames so that the annotations, i.e., displayable ticker data can be synchronized for display at client computer 240 at predetermined points corresponding to the timeline of the video stream."*) (The Examiner asserts that the client retrieves and displays the annotation data according to the timeline. The client first has to first determine if there is any annotation frames. If there is no annotation frames, the client does not have to display annotation data, it just plays the video/audio stream data) (col 9, lines 40-67); (d) determining whether a start time tag (i.e. start time indicator) (col 7, lines 9-20) exists in said data segment (col 3, lines 1-25) that specifies when said time period is to begin (i.e. *"Another visual control aid, zoom*

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*bar 716, enables designer 219 to select the respective portions of the complete time tracks 750, 760, 770, 780, and 790, and defined by start time indicator 712 and end time indicator 718, which is currently displayed by author tool 700.* ... *"Ticker annotation frames are provided by the stream server 220 synchronously with the video/audio frames so that the annotations, i.e., displayable ticker data can be synchronized for display at client computer 240 at predetermined points corresponding to the timeline of the video stream."*) (The Examiner asserts that the client receives and displays the annotation data synchronously with the audio/video data. The client first determines if there is an annotation frame to be reproduced and if there is any timeline associated with the annotation frame. Therefore if there is a timeline (the timeline consists of the difference between start time and end time) associated with the annotation frame, the annotation frame data is reproduced at the client according to the timeline synchronously with the audio/video data, otherwise (i.e. there is no start time/end time) at the same time with the video/audio data frames. If there is no annotation frame, there is no annotation data to reproduce, the client just plays the video/audio stream data) (col 7, lines 10-67; col 9, lines 45-67); (e) if said start time tag (i.e. start time indicator) (col 7, lines 9-20) does not exist, then proceeding to step (j) (i.e. *"Another visual control aid, zoom bar 716, enables designer 219 to select the respective portions of the complete time tracks 750, 760, 770, 780, and 790, and defined by start time indicator 712 and end time indicator 718, which is currently displayed by author tool 700."* ... *"Ticker annotation frames are provided by the stream server 220 synchronously with the video/audio frames so that the annotations, i.e., displayable ticker data can be synchronized for display at client computer 240 at predetermined points corresponding to the timeline of the video stream."*) (The Examiner asserts that the client receives and displays the annotation data synchronously with the audio/video data. The client first determines if there is an annotation frame to be reproduced and if there is any timeline associated with the annotation frame. Therefore if there is a timeline (the timeline consists of the difference between start time and end time) associated with the annotation frame, the annotation frame data is reproduced at the client according to the timeline synchronously with the audio/video data, otherwise (i.e. there is no start time indicator/end time indicator) at the same time with the video/audio data frames. If there is no annotation frame, there is no annotation data to reproduce, the client just plays the video/audio stream data) (col 7, lines 10-67; col 9, lines 45-67); (f) determining the start time specified by said start time tag (i.e. *"Another visual control aid, zoom*

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*bar 716, enables designer 219 to select the respective portions of the complete time tracks 750, 760, 770, 780, and 790, and defined by start time indicator 712 and end time indicator 718, which is currently displayed by author tool 700." ... "Ticker annotation frames are provided by the stream server 220 synchronously with the video/audio frames so that the annotations, i.e., displayable ticker data can be synchronized for display at client computer 240 at predetermined points corresponding to the timeline of the video stream."*) (The Examiner asserts that the client receives and displays the annotation data synchronously with the audio/video data. The client first determines if there is an annotation frame to be reproduced and if there is any timeline associated with the annotation frame. Therefore if there is a timeline (the timeline consists of the difference between start time and end time) associated with the annotation frame, the annotation frame data is reproduced at the client according to the timeline synchronously with the audio/video data, otherwise (i.e. there is no start time indicator/end time indicator) at the same time with the video/audio data frames. If there is no annotation frame, there is no annotation data to reproduce, the client just plays the video/audio stream data) (col 7, lines 10-67; col 9, lines 45-67); (j) determining whether a stop time tag (i.e. end time indicator) (col 7, lines 9-20) exists in said data segment (col 3, lines 1-25) that specifies when said time period is to end (i.e. *"Another visual control aid, zoom bar 716, enables designer 219 to select the respective portions of the complete time tracks 750, 760, 770, 780, and 790, and defined by start time indicator 712 and end time indicator 718, which is currently displayed by author tool 700." ... "Ticker annotation frames are provided by the stream server 220 synchronously with the video/audio frames so that the annotations, i.e., displayable ticker data can be synchronized for display at client computer 240 at predetermined points corresponding to the timeline of the video stream."*) (The Examiner asserts that the client receives and displays the annotation data synchronously with the audio/video data. The client first determines if there is an annotation frame to be reproduced and if there is any timeline associated with the annotation frame. Therefore if there is a timeline (the timeline consists of the difference between start time and end time) associated with the annotation frame, the annotation frame data is reproduced at the client according to the timeline synchronously with the audio/video data, otherwise (i.e. there is no start time indicator/end time indicator) at the same time with the video/audio data frames. If there is no annotation frame, there is no annotation data to reproduce, the client just plays the video/audio stream data) (col 7, lines 10-67; col 9, lines 45-67); (k) if said stop time

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tag does not exist, then proceeding to step (o) (i.e. *"Another visual control aid, zoom bar 716, enables designer 219 to select the respective portions of the complete time tracks 750, 760, 770, 780, and 790, and defined by start time indicator 712 and end time indicator 718, which is currently displayed by author tool 700."* ... *"Ticker annotation frames are provided by the stream server 220 synchronously with the video/audio frames so that the annotations, i.e., displayable ticker data can be synchronized for display at client computer 240 at predetermined points corresponding to the timeline of the video stream."*) (The Examiner asserts that the client receives and displays the annotation data synchronously with the audio/video data. The client first determines if there is an annotation frame to be reproduced and if there is any timeline associated with the annotation frame. Therefore if there is a timeline (the timeline consists of the difference between start time and end time) associated with the annotation frame, the annotation frame data is reproduced at the client according to the timeline synchronously with the audio/video data, otherwise (i.e. there is no start time indicator/end time indicator) at the same time with the video/audio data frames. If there is no annotation frame, there is no annotation data to reproduce, the client just plays the video/audio stream data) (col 7, lines 10-67; col 9, lines 45-67); (l) determining the stop time specified in said stop time tag (i.e. *"Another visual control aid, zoom bar 716, enables designer 219 to select the respective portions of the complete time tracks 750, 760, 770, 780, and 790, and defined by start time indicator 712 and end time indicator 718, which is currently displayed by author tool 700."* ... *"Ticker annotation frames are provided by the stream server 220 synchronously with the video/audio frames so that the annotations, i.e., displayable ticker data can be synchronized for display at client computer 240 at predetermined points corresponding to the timeline of the video stream."*) (The Examiner asserts that the client receives and displays the annotation data synchronously with the audio/video data. The client first determines if there is an annotation frame to be reproduced and if there is any timeline associated with the annotation frame. Therefore if there is a timeline (the timeline consists of the difference between start time and end time) associated with the annotation frame, the annotation frame data is reproduced at the client according to the timeline synchronously with the audio/video data, otherwise (i.e. there is no start time indicator/end time indicator) at the same time with the video/audio data frames. If there is no annotation frame, there is no annotation data to reproduce, the client just plays the video/audio stream data) (col 7, lines 10-67; col 9, lines 45-67); (o) reproducing said data

segment (i.e. *"Ticker annotation frames are provided by the stream server 220 synchronously with the video/audio frames so that the annotations, i.e., displayable ticker data can be synchronized for display at client computer 240 at predetermined points corresponding to the timeline of the video stream."*) (The Examiner asserts that the client receives and displays the annotation data synchronously with the audio/video data. The client first determines if there is an annotation frame to be reproduced and if there is any timeline associated with the annotation frame. Therefore if there is a timeline (the timeline consists of the difference between start time and end time) associated with the annotation frame, the annotation frame data is reproduced at the client according to the timeline synchronously with the audio/video data, otherwise (i.e. there is no start time indicator/end time indicator) at the same time with the video/audio data frames. If there is no annotation frame, there is no annotation data to reproduce, the client just plays the video/audio stream data) (col 7, lines 10-67; col 9, lines 45-67); and (p) Continuing to step (a) (i.e. The Examiner asserts that the client moves on to the next frame in the stream) (col 7, lines 10-67; col 9, lines 45-67).

Purnaveja does not explicitly teach embedding data segment as part of said encoded media data.

Tao teaches embedding data segment as part of said encoded media data (i.e. *"The present invention pertains to a method and system thereof for invisibly encoding and embedding information within digital data representing, for example, audio data, image data, and video data." ... "In one embodiment, the digital data are in a compressed format (e.g. JPEG MPEG for image data, MP3 or AC3 for audio data, as well as other data compression formats.)"*) (Abstract; col 2, lines 28-45; col 3, lines 1-10).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Purnaveja with the teachings of Tao to include embedding data segment as part of said encoded media data with the motivation to embed multiple speech streams into a video, each speech stream in a different language, so that the video can be distributed to a wide range of users who



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can then each view the video in the language of their choosing (Tao, col 1, lines 30-35) and to store a large amount of information while being robust against noise (Tao, col 4, lines 33-36).

Purnaveja does not explicitly teach (g) getting the current time; (h) comparing said start time to the current time; (i) if the current time is before said start time then proceeding to step (p); (m) comparing said stop time tag to the current time; (n) if the current time is after said stop time then proceeding to step (p).

Sonoda teaches (g) getting the current time (col 22, line 67; col 23, lines 1-26); (h) comparing said start time (col 22, line 67; col 23, lines 1-26) to the current time (i.e. *"The reception control unit 130 asks the timing managing unit 132 the current time, and compares the obtained "start\_time" with the current time"*) (col 22, line 67; col 23, lines 1-26); (i) if the current time is before said start time then proceeding to step (p) (i.e. *"The reception control unit 130 asks the timing managing unit 132 the current time, and compares the obtained "start\_time" with the current time. When the current time is in the period between the "start\_time" and the "start time+duration," the reception control unit 130 immediately refers to the system tables corresponding to the latest reselected program stored in the system table storage unit 127, and instructs TS decoder unit 122 to extract the presentation data of the program."*) (Abstract; col 22, line 67; col 23, lines 1-26); (m) comparing said stop time (i.e.  $\text{start\_time} + \text{duration}$ ) (col 22, line 67; col 23, lines 1-26) tag to the current time (i.e. *"The reception control unit 130 asks the timing managing unit 132 the current time, and compares the obtained "start\_time" with the current time. When the current time is in the period between the "start\_time" and the "start time+duration," the reception control unit 130 immediately refers to the system tables corresponding to the latest reselected program stored in the system table storage unit 127, and instructs TS decoder unit 122 to extract the presentation data of the program."*) (Abstract; col 22, line 67; col 23, lines 1-26); (n) if the current time (i.e. *"The reception control unit 130 asks the timing managing unit 132 the current time, and compares the obtained "start\_time" with the current time. When the current time is in the period between*

*the "start\_time" and the "start time+duration," the reception control unit 130 immediately refers to the system tables corresponding to the latest reselected program stored in the system table storage unit 127, and instructs TS decoder unit 122 to extract the presentation data of the program.*") (Abstract; col 22, line 67; col 23, lines 1-26) is after said stop time (i.e. "start time+duration") (Abstract; col 22, line 67; col 23, lines 1-26) then proceeding to step (p) (Abstract; col 22, line 67; col 23, lines 1-26).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Purnaveja and Tao with the teachings of Sonoda to include (g) getting the current time; (h) comparing said start time to the current time; (i) if the current time is before said start time then proceeding to step (p); (m) comparing said stop time tag to the current time; (n) if the current time is after said stop time then proceeding to step (p) with the motivation to broadcast the promotional program (i.e. annotation data) in the same broadcast periods as the object programs (i.e. audio/video data in Purnaveja) (Sonoda,; col 23, lines 1-3) and to facilitate the manipulation of the viewer for pre-selecting programs (Sonoda, col 8, lines 63-64) .

As to claim 15, Purnaveja teaches that the media file is an audio file (i.e. "*Annotated multimedia streams can include a compressed video stream for display in a video window, an accompanying compressed audio stream and annotations.*" ... "*Sources for generating video streams include a video camera 312, a video cassette recorder (VCR) (not shown) or a previously digitized video file 314, e.g., a Video for Windows (.avi) file.*") (Examiner asserts that Purnaveja explicitly states that the system and the associated method are applicable to video, audio and image data. A video file example is given, but it is also applicable to audio media file(s)) (col 2, lines 35-67; col 5, lines 54-64) and said data segment (col 3, lines 1-25) is a non-audio data segment (i.e. "*The first type of annotation streams are data annotation streams in which the displayable*

*event data are embedded within the annotation streams. Examples of data annotation streams include ticker tape data embedded within the annotation stream.”*) (col 6, lines 25-67).

Purnaveja does not explicitly teach embedding data segment as part of said encoded media data.

Tao teaches embedding data segment as part of said encoded media data (i.e. *“The present invention pertains to a method and system thereof for invisibly encoding and embedding information within digital data representing, for example, audio data, image data, and video data.” ... “In one embodiment, the digital data are in a compressed format (e.g. JPEG MPEG for image data, MP3 or AC3 for audio data, as well as other data compression formats.)”*) (Abstract; col 2, lines 28-45; col 3, lines 1-10).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Purnaveja with the teachings of Tao to include embedding data segment as part of said encoded media data with the motivation to embed multiple speech streams into a video, each speech stream in a different language, so that the video can be distributed to a wide range of users who can then each view the video in the language of their choosing (Tao, col 1, lines 30-35) and to store a large amount of information while being robust against noise (Tao, col 4, lines 33-36).

As to claim 16, Purnaveja teaches the step of proceeding to step (o) if no current time is available (i.e. *“Ticker annotation frames are provided by the stream server 220 synchronously with the video/audio frames so that the annotations, i.e., displayable ticker data can be synchronized for display at client computer 240 at predetermined points corresponding to the timeline of the video stream.”*) (The Examiner asserts that the client receives and displays the annotation data synchronously with the audio/video data. The client first determines if there is an annotation frame to be reproduced and if there is any timeline associated with the

annotation frame. Therefore if there is a timeline (the timeline consists of the difference between start time and end time) associated with the annotation frame, the annotation frame data is reproduced at the client according to the timeline synchronously with the audio/video data, otherwise (i.e. there is no start time indicator/end time indicator or there is no current time provided by the client system there is no way of verifying the time restriction and hence the annotation data is reproduced synchronously with the media data) at the same time with the video/audio data frames. If there is no annotation frame, there is no annotation data to reproduce, the client just plays the video/audio stream data) (col 7, lines 10-67; col 9, lines 45-67).

As to claim 17, Purnaveja teaches the step of proceeding to step (p) if no current time is available (i.e. *"Ticker annotation frames are provided by the stream server 220 synchronously with the video/audio frames so that the annotations, i.e., displayable ticker data can be synchronized for display at client computer 240 at predetermined points corresponding to the timeline of the video stream."*) (The Examiner asserts that the client receives and displays the annotation data synchronously with the audio/video data. The client first determines if there is an annotation frame to be reproduced and if there is any timeline associated with the annotation frame. Therefore if there is a timeline (the timeline consists of the difference between start time and end time) associated with the annotation frame, the annotation frame data is reproduced at the client according to the timeline synchronously with the audio/video data, otherwise (i.e. there is no start time indicator/end time indicator or there is no current time provided by the client system there is no way of verifying the time restriction and hence the annotation data is reproduced synchronously with the media data) at the same time with the video/audio data frames. If there is no annotation frame, there is no annotation data to reproduce, the client just plays the video/audio stream data and the client moves on reading the new audio/video frame transmitted by the stream server) (col 7, lines 10-67; col 9, lines 45-67).

As to claim 18, Purnaveja teaches that the step (o) further includes the step of determining whether said segment (i.e. the annotation frame) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9;

Fig. 10A) is reproduced based on input from a user (i.e. *"Flipper annotation frames are provided by stream server 220 synchronously with the video/audio frames to the client module 960 so that the annotations, i.e., displayable events can be synchronized for display at client computer 24 (step 1060). In this example, URL addresses, for synchronizing HTML page flips with video stream are provided to web browser 950 thereby permitting client computer 240 to subsequently retrieve and display various textual and graphical elements changing at predetermined points corresponding to the timeline of the video stream. Note that HTML pages can be retrieved from one or more web server(s) 230."*) (Examiner asserts that the client needs user input (or client has to determine if the user wants to reproduce the HTML pages in the web browser using the URL/ internet address provided in the annotation frames) to retrieve the HTML pages from the web server(s)) (col 7, lines 10-67; col 9, lines 45-67).

Purnaveja does not explicitly teach embedding data segment as part of said encoded media data.

Tao teaches embedding data segment as part of said encoded media data (i.e. *"The present invention pertains to a method and system thereof for invisibly encoding and embedding information within digital data representing, for example, audio data, image data, and video data." ... "In one embodiment, the digital data are in a compressed format (e.g. JPEG MPEG for image data, MP3 or AC3 for audio data, as well as other data compression formats.)"*) (Abstract; col 2, lines 28-45; col 3, lines 1-10).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Purnaveja with the teachings of Tao to include embedding data segment as part of said encoded media data with the motivation to embed multiple speech streams into a video, each speech stream in a different language, so that the video can be distributed to a wide range of users who can then each view the video in the language of their choosing (Tao, col 1, lines 30-35) and

to store a large amount of information while being robust against noise (Tao, col 4, lines 33-36).

As to claim 19, Purnaveja teaches the reproducing of said data segment (i.e. interpreting the encoded annotated frame by annotation interpreter 963) (Abstract; Fig.3; Fig.4B; Fig.8B; Fig.9; Fig.10A; col 3, lines 1-25; col 9, lines 10-25) in step (o) includes subsequent processing for enabling the data to be displayed to a user (i.e. *The second type of annotation streams are locator annotation streams in which the displayable data is either too cumbersome and/or is continually evolving to be embedded as static data within the annotation stream. Instead, event locator(s) pointing to the location of the displayable data are stored in the annotation streams instead of the displayable data. Examples include URL addresses pointing to HTML pages.* ... *"In this example, URL addresses, for synchronizing HTML page flips with video stream are provided to web browser 950 thereby permitting client computer 240 to subsequently retrieve and display various textual and graphical elements changing at predetermined points corresponding to the timeline of the video stream. Note that HTML pages can be retrieved from one or more web server(s) 230."*) (Examiner asserts that the client needs user input (or client has to determine if the user wants to reproduce the HTML pages in the web browser using the URL/ internet address provided in the annotation frames) to retrieve the HTML pages from the web server(s)) (col 6, lines 50-67; col 9, lines 45-67).

Purnaveja does not explicitly teach embedding data segment as part of said encoded media data.

Tao teaches embedding data segment as part of said encoded media data (i.e. *"The present invention pertains to a method and system thereof for invisibly encoding and embedding information within digital data representing, for example, audio data, image data, and video data."* ... *"In one embodiment, the digital data are in a compressed format (e.g. JPEG MPEG for image data, MP3 or AC3 for audio data, as well as other data compression formats.)"*) (Abstract; col 2, lines 28-45; col 3, lines 1-10).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Purnaveja with the teachings of Tao to include embedding data segment as part of said encoded media data with the motivation to embed multiple speech streams into a video, each speech stream in a different language, so that the video can be distributed to a wide range of users who can then each view the video in the language of their choosing (Tao, col 1, lines 30-35) and to store a large amount of information while being robust against noise (Tao, col 4, lines 33-36).

As to claim 20, Purnaveja teaches that the data segment (i.e. the annotation frame) (col 9, lines 10-25) is an Internet address (i.e. *"Examples include URL addresses pointing to HTML pages."*) (col 6, lines 49-67).

Purnaveja does not explicitly teach embedding data segment as part of said encoded media data.

Tao teaches embedding data segment as part of said encoded media data (i.e. *"The present invention pertains to a method and system thereof for invisibly encoding and embedding information within digital data representing, for example, audio data, image data, and video data."* ... *"In one embodiment, the digital data are in a compressed format (e.g. JPEG MPEG for image data, MP3 or AC3 for audio data, as well as other data compression formats.)"*) (Abstract; col 2, lines 28-45; col 3, lines 1-10).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Purnaveja with the teachings of Tao to include embedding data segment as part of said encoded media data with the motivation to embed multiple speech streams into a video, each speech stream in a

different language, so that the video can be distributed to a wide range of users who can then each view the video in the language of their choosing (Tao, col 1, lines 30-35) and to store a large amount of information while being robust against noise (Tao, col 4, lines 33-36).

As to claim 21, Purnaveja teaches that the processing includes linking to an Internet document (i.e. HTML pages) (col 6, lines 49-67) determined by said Internet address (i.e. *"Examples include URL addresses pointing to HTML pages."*) (col 6, lines 49-67).

#### ***Points of Contact***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Apu M. Mofiz whose telephone number is (703) 605-4240. The examiner can normally be reached on Monday – Thursday 8:00 A.M. to 4:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached at (703) 305-3830. The fax numbers for the group is (703) 872-9306.

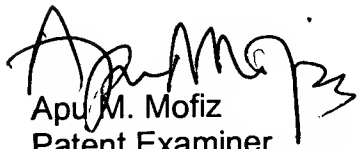


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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.



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Patent Examiner  
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